



TRANSFORMING



TARANAKI

A strong community is one that comes together and collectively takes action for a common and worthy cause. This is the story of such a community. Our Taranaki community.

The common cause is healthier ecosystems. The Riparian Management Programme is transforming Taranaki.

Nearly 30 years ago, the community picked up a mammoth challenge: Fencing and planting thousands of kilometres of waterways. They made the project their own. Today, our waterways are at or near the healthiest state ever recorded, and the ring plain's indigenous biodiversity is on a firmer footing.

It's a world-scale ecological restoration project. This booklet celebrates its achievements and looks forward to more gains in the future.

David MacLeod,
Chairman, Taranaki Regional Council
October 2019

Taranaki at the forefront



As a field ecologist, there are many disadvantages in growing older. But one special advantage is being aware of the rate and magnitude of change on the landscape, especially when the change is for the better. I first became interested in indigenous nature in Taranaki 60 years ago and began formally documenting ecosystems, particularly in Egmont National Park, more than 40 years ago. It was possible in those earlier days to swim in and drink from waterways without any danger of a stomach complaint. And kōkako, kiwi and whio could still be encountered in many parts of the region. I distinctly remember the many 'dead areas' of the lower subalpine shrub belt infested by herds of goats, the regular cattle trespass within the park and the massive foliage loss of palatable native trees caused by rapid increases in possum numbers. Then there was the 'tidying up' of smaller remnants of lowland forest on the ring plain.

Who would have believed back then the potential for a turnaround in attitude and management practice evident today? This is beginning to gather pace. The Taranaki Regional Council has been instrumental in this shift through a collaborative partnership approach to management of our land and water ecosystems. A wide range of innovative projects, including the riparian planting programme, Towards Predator-Free Taranaki, Wild for Taranaki and Project Mounga, are helping to reconnect and restore the health of our unique Taranaki landscapes and ecosystems.

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A good number of the sites I documented at the beginning of my career are now in better condition than previously and many of our native birds have been returned to areas they have been absent from for decades.

My own connection with this land, while inspired by a love of nature, is tempered by the more cautious analysis of an environmental scientist observing progress nationally and internationally. However, the evidence is gathering that Taranaki is on a trajectory, which puts it at the forefront of a more sympathetic and intergenerational approach to land and water management. This comes in the form of regenerative and sustainable agricultural practices and landscape-scale ecological restoration.

But we cannot be complacent. Significant challenges, including the climate change emergency and the arrival of new diseases such as myrtle rust, mean that conventional siloed approaches will be inadequate in scale and magnitude. Only with collaborative partnerships that empower and support community-level action can these challenges be met.

Professor Bruce Clarkson
Deputy Vice-Chancellor Research, University of Waikato

A region transformed

Since the 1990s, landowners and farmers on the Taranaki ring plain and coastal terraces have voluntarily protected rivers, streams and wetlands with 5.6 million plants and 13,000km of fencing, with more of each to come. This work is:

- Transforming the landscape, breaking monotonous grassy monoculture with dense green ribbons, rich in biodiversity values, radiating from all sides of the mountain.
- Transforming rivers, streams and wetlands after decades of riparian vegetation being removed and waterways being used as disposal channels for pasture run-off and raw waste. Today they are at or near the best ecological state ever recorded, thanks to streamside fencing and planting along with major investments by communities and industries to clean up their acts.
- Securing the future of native plants and wildlife on the ring plain, where riparian protection now offers 6,000 hectares of protected native habitat alongside waterways. The community is currently rallying around an ambitious new campaign to build on this by ridding the region of introduced predators to help indigenous biodiversity recover and thrive.

Video: www.bit.ly/TransformTaranaki

15,409 km
streambanks

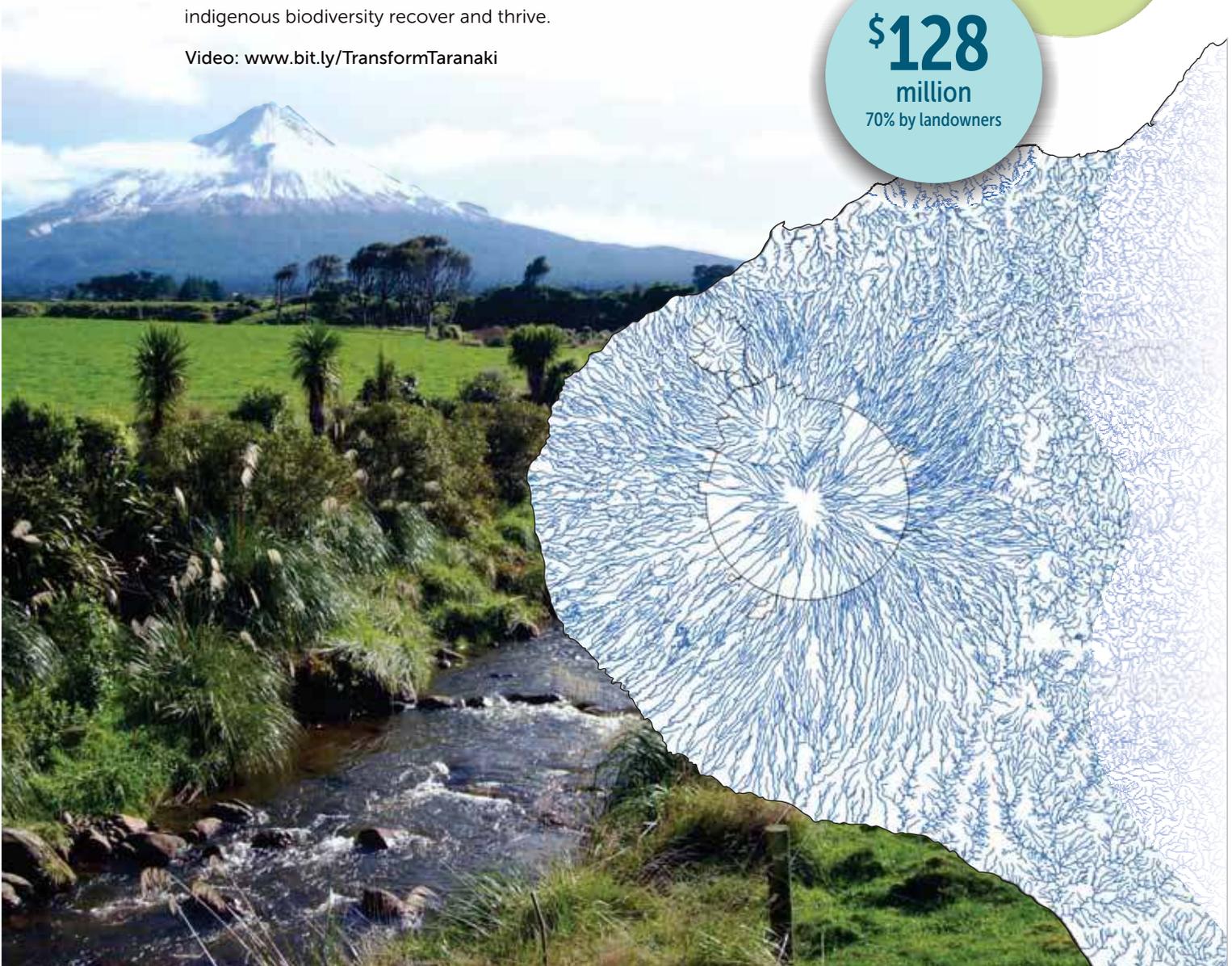
13,756 km
fenced

8,928 km
riparian
vegetation

5.6
million plants

6,000 ha
native habitat
protected

\$128
million
70% by landowners



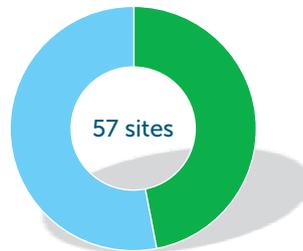
How do we know it's working?

Monitoring by the Taranaki Region Council in recent years shows our rivers and streams are at or near the best ecological health ever recorded.

The Council and independent NIWA scientists say riparian fencing and planting is a strong factor in the improved ecological health of Taranaki's rivers and streams, along with a reduction in bacteria levels. Other factors include investment by communities and industry to eliminate or drastically reduce the impact of direct discharges.

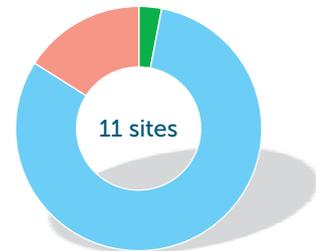
www.trc.govt.nz/taranaki-waterways-updates

River ecology trends
1995-2018



47% Improvement
53% No obvious trend
0% Deterioration

Physical and chemical trends
2011-2018



3% Improvement
81% No obvious trend
16% Deterioration



The bugs tell the story

The best way to gauge the overall health of a waterway is to study what sort of insects, molluscs, worms and other small creatures live in it. Are they fussy ones, who don't tolerate poor-quality water? Or do they thrive in filth? Using a scoring system based on the sensitivity of different species to water quality, and monitoring the same sites over a long period, the ecological health of our rivers and streams can be assessed and tracked. Taranaki's waterways have shown consistent improvement in recent years.

Think carefully about nutrients

Ecological monitoring gives a more complete picture than nutrient levels and other physical and chemical measurements such as bacteria levels, water clarity, conductivity and acidity, nutrient levels and oxygen levels. At best, these intermittent measurements give an indication of the health pressures a waterway may be under. But they can also vary according to weather conditions and how high or low the river is running.

Crucially, the Council and NIWA scientists have found that ecological health is improving even where nitrogen levels are increasing. The relationship between nutrient levels and stream health is clearly not as simplistic and straightforward as often suggested.

The verdict of science

Taranaki Riparian Management Programme has had beneficial effects on stream health and water quality for human health and recreation in the region . . .

Analysis of stream responses to riparian management on the Taranaki ring plain, NIWA, 2008 www.bit.ly/RiparianReport2018

What's different about this project?

- Scope and scale – it captures every waterway of any size, whether permanent or seasonal.
- It doesn't stop at stock exclusion also but includes the far bigger task of planting. This brings greater ecological and freshwater-health benefits.
- Fencing and planting plans are individually tailored for each property – because clearly, one size cannot fit all.
- Landowners (mostly farmers) meet the cost of the physical work and materials. There are no subsidies. Only occasional minor grants have been made in some places.
- It has been voluntary, not required by regulation. Farmers knew it was the right thing to do and took ownership of it. Compliance and enforcement have not been costly issues.
- It is a happening reality, not a concept. It's well-established and heading towards completion.

What the farmers say

“ *This is our little slice of paradise, but it wasn't always like this. I can remember trying to cross the river and the rocks would be all slimy and slippery and the water level was low and warm, like unnaturally warm – it's because there wasn't the shade. Now it's a pleasure that my children get to enjoy this.*”

– Megan Symons, Opunake www.bit.ly/TransformTaranaki

Megan and Matt Symons run the family farm where Megan's father, Gordon Symes, was one of the first Taranaki dairy farmers to start streamside fencing and planting in the 1990s.

“ *It's a matter of complying with requirements and expectations, and it goes beyond that. We want cleaner waterways too, and we're also enjoying the visual impact and the return of bird life. And from a stock-management point of view, it's been useful ... we see our fencing and planting as an investment for the future.*”

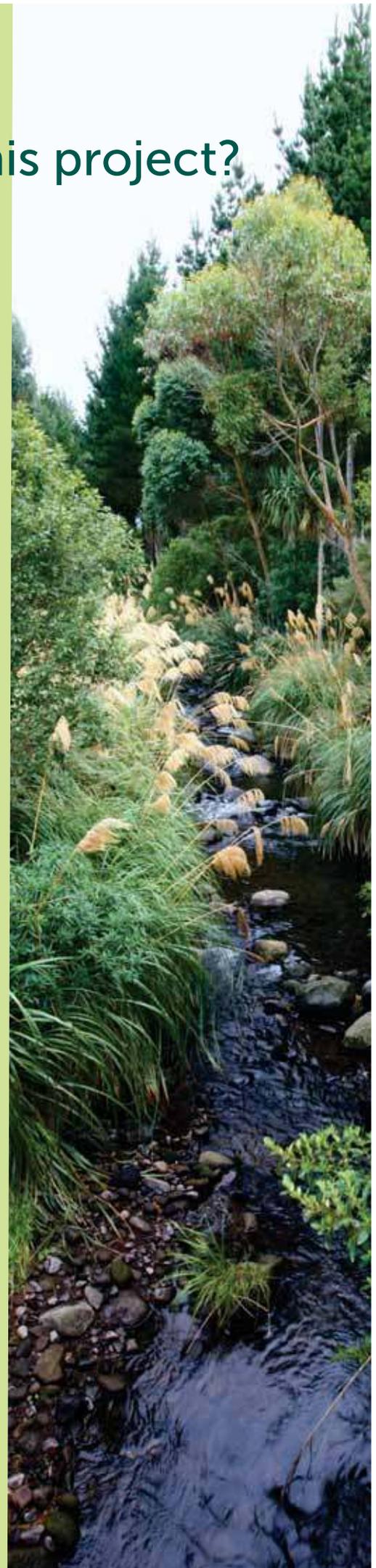
– Rob and Di Bridgeman, Okato. www.bit.ly/Riparian2018

Rob and Di Bridgeman have planted nearly 5,000 native plants and erected fences to protect 3km of streambank and a small wetland on their dairy farm.

“ *I certainly feel that Taranaki's further ahead than most regions because we've been doing it for longer and it's been voluntary, with help. We don't get paid to do it, we don't get subsidised to do it, but we get helped to do it – farm plans, plants at cost.*”

– Blue Read, Pukearuhe www.bit.ly/TransformTaranaki

Blue Read had one of the first riparian management plans, pre-dating the launch of the region-wide programme.



Substantially farmer-funded

This has been a voluntary scheme, funded largely by farmers. Great progress has been achieved because people understood what they needed to do, not because they were forced to by a rule in a Regional Plan.

Run-off from pasture – ‘diffuse-source discharges’ – was recognised in the 1990s as a key factor behind the poor state of many Taranaki waterways. After consulting specialists and engaging with the community, the Taranaki Regional Council determined that fencing and planting streambanks would be the most effective response. Fences prevent stock from entering and fouling waterways, and vegetation provides a buffer to run-off and shades the water, promoting stream health.

The Council then geared itself up to deliver this project, and started bringing key players on board by encouraging them to understand why it was important to be part of it.

This was the deal

Council staff have worked one-on-one with landowners to draw up individual, property-specific Riparian Management Plans setting out the areas to be fenced and planted, the best native plant varieties to use, and a timeframe for completion. The advent of digital technology has made this more efficient and speedier as the programme progressed. The Council has also organised the supply of suitable riparian plants at cost, and coordinated contractors for those unable to attend to fencing/planting/maintenance themselves. The Council’s one-on-one advice and support continues as plans are implemented.

Farmers are implementing their plans by making annual plant purchases, getting them planted and completing the required fencing.



2,889
Riparian Management
Plans prepared

Covers
15,409 km
of streambanks on
99.9%
of Taranaki dairy
farms

Progress at 30 June 2019

13,756 km
(86.5% of total)
protected by
fences

8,928 km
(73.7% of total)
protected by
vegetation

more than
70%
funded by
farmers

5.6 million
new plants plus
pre-existing
planting

6,000 ha
of protected native
habitat alongside
streams

\$128
million
spent to date

Are we there yet?

Freshwater management has been undergoing great change, with the Government issuing a raft of new requirements and proposing more. Whatever eventuates, the riparian fencing and planting effort by Taranaki landowners means they're well placed to meet any reasonable responsibilities they may face in the future.

The Council, too, is thinking ahead. Taranaki's new Regional Freshwater and Land Plan, due for public notification in mid-2020, will include compliance requirements aimed particularly at the small number of landowners who have stayed distant from the riparian programme. Council staff have begun auditing all riparian plans to ensure they include all waterways and regionally significant wetlands to meet future regulatory requirements.

Meanwhile, under direction from the Council, the dairy-farming community is also investing in improvements to effluent disposal, switching to land-based systems that leave waterways out of the equation. Together with continued riparian fencing and planting, this is expected to result in further improvements to waterway health.

Strong focus on biodiversity

As with the Riparian Management Programme, enthusiastic community support is the bedrock of more recent initiatives to protect and restore the region's native biodiversity.

Towards Predator-Free Taranaki, launched in mid-2018, is already showing results in urban New Plymouth, where rat and possum numbers are decreasing, and the trapping network is expanding rapidly in rural areas as well, building on the success of the long-running Self-Help Possum Control Programme.

Led by the Taranaki Regional Council, the project will cost \$47 million in the first five years, with \$11.7 million from the Government. It is the biggest project of its kind in the country. www.trc.govt.nz/pf-taranaki2050

The region's voluntary Key Native Ecosystem (KNE) programme has also been growing rapidly. The Council has identified 293 KNEs covering almost 123,400 hectares, most partly or fully in private ownership. Council staff are working with the owners of 132 of them, covering 5,300ha, to prepare and implement individual Biodiversity Plans, mostly involving fencing, predator and pest-plant control, and restoration planting. Twenty to 25 new Biodiversity Plans are prepared every year.

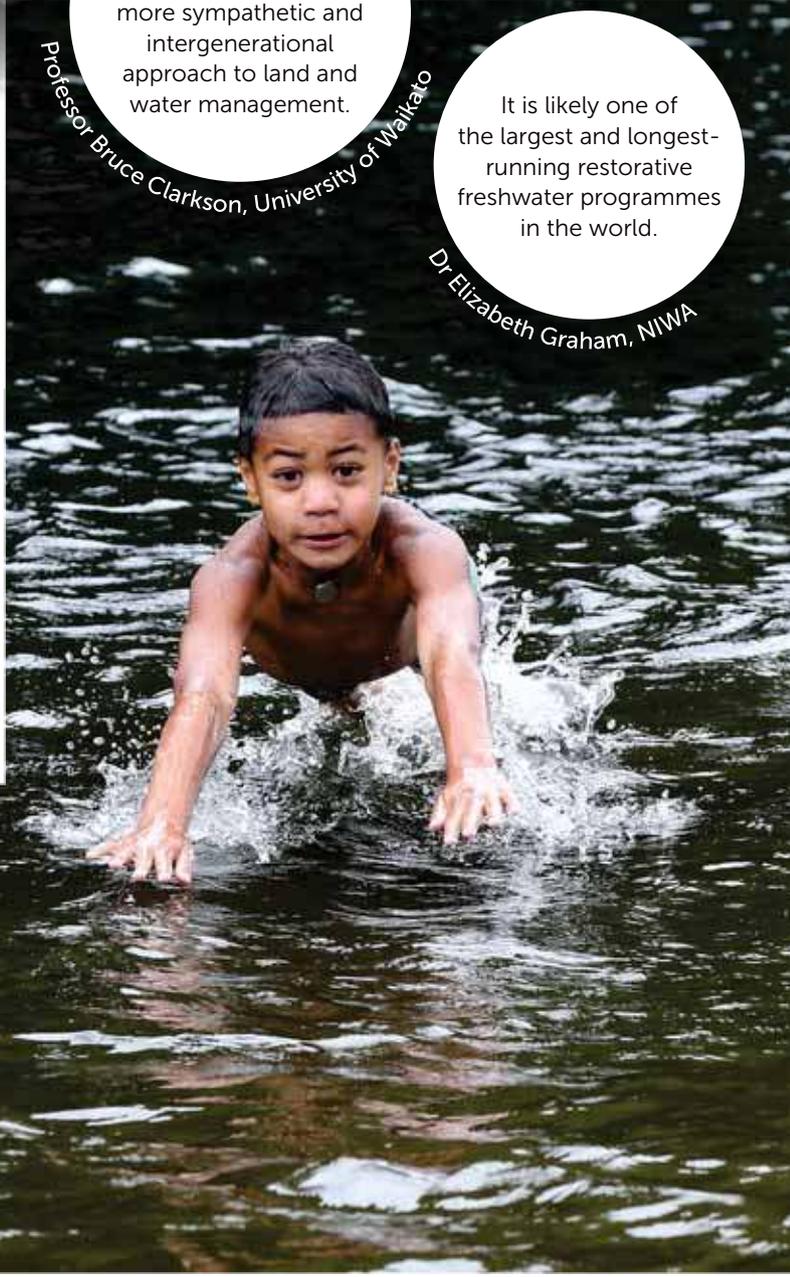




Many lessons in long journey

Taranaki's achievements offer useful pointers for all involved in resource and environmental management:

- Community buy-in is essential. Taranaki farmers are devoting millions of dollars and thousands of hours to riparian protection not because they have been forced to by a rule or regulation, but because they understand and accept the need for it.
- One size doesn't necessarily fit all. New Zealand's river catchments vary widely by soil, climate, hydrology and land use. To be effective, remedial work is best tailored by the local community to suit local conditions.
- The strategy must be clear. The success of Taranaki's Riparian Management Scheme is built on three foundations: establishing a sound case for the project, ensuring that it can be delivered, and crucially, bringing key players on board by encouraging them to understand it and want to be part of it.



Taranaki is on a trajectory which puts it at the forefront of a more sympathetic and intergenerational approach to land and water management.

Professor Bruce Clarkson, University of Waikato

It is likely one of the largest and longest-running restorative freshwater programmes in the world.

Dr Elizabeth Graham, NIWA

National and international recognition

The Riparian Management Programme has been recognised with a number of awards

2019 Excellence Award for Environmental Well-Being (Local Government NZ)

2013 Green Ribbon Award (Ministry for the Environment)

2011 Geospatial World Forum Excellence Award for Land and Resource Management

2010 NZ Resource Management Law Association Project Award



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